

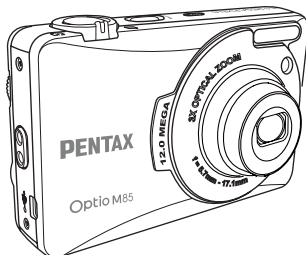
PENTAX



Digital Camera

Optio M85

Operating Manual



To ensure the best performance from your camera, please read the Operating Manual before using the camera.

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Preface

About this Manual

Thank you for purchasing this PENTAX Digital Camera. Please read this manual before using the camera in order to get the most out of all the features and functions. Keep this manual safe, as it can be a valuable tool in helping you to understand all the camera capabilities.

Regarding Copyrights

Images taken using the PENTAX Digital Camera that are for anything other than personal enjoyment cannot be used without permission according to the rights as specified in the Copyright Act. Please take care, as there are cases where limitations are placed on taking pictures even for personal enjoyment during demonstrations, performances or of items on display. Images taken with the purpose of obtaining copyrights also cannot be used outside the scope of use of the copyright as laid out in the Copyright Act, and care should be taken here also.

Trademark Recognition

- PENTAX and Optio are trademarks of HOYA CORPORATION.
- SDHC logo () is trademark.
- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and other countries.
- Windows Vista is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- Adobe, the Adobe logo, and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- ArcSoft is the trademark of ArcSoft Inc.
- All other brands or product names are trademarks or registered trademarks of their respective companies.

To users of this camera

- There is a possibility that recorded data may be erased or that the camera may not function correctly when used in surroundings such as installations generating strong electromagnetic radiation or magnetic fields.
- The liquid crystal panel used in the display is manufactured using extremely high precision technology. Although the level of functioning pixels is 99.99% or better, you should be aware that 0.01% or fewer of the pixels may not illuminate or may illuminate when they should not. However, this has no effect on the recorded image.
- There is a possibility that the illustrations and the display screen in this manual are different from the actual product.
- Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields.
- Strong static charges or the magnetic fields produced by equipment such as radio transmitters could interfere with the monitor, damage the stored data, or affect the product's internal circuitry and cause camera misoperation.

Regarding Product Registration

In order to better serve you, we request that you complete the product registration, which can be found on the CD-ROM (S-SW95) supplied with the camera or on the PENTAX website. Thank you for your cooperation.

USING YOUR CAMERA SAFELY

We have paid close attention to the safety of this product. When using this product, we request your special attention regarding items marked with the following symbols.



Warning This symbol indicates that violating this item could cause serious personal injuries.



Caution This symbol indicates that violating this item could cause minor or medium personal injuries, or material losses.

About the Camera



Warning

- Do not attempt to take the camera apart or remodel the camera. High voltages are present within the camera, and there is therefore a danger of electric shocks if the camera is taken apart.
- If the inside of the camera should become exposed as a result of, for example, the camera being dropped, please do not under any circumstances touch such exposed portions, as there is a danger of receiving an electric shock.
- To avoid the risk of it being swallowed by mistake, keep the memory card out of the reach of small children. Seek medical attention immediately if a card is accidentally swallowed.
- Wrapping the strap of the camera around your neck is also dangerous. Please take care that small children do not hang the strap around their necks.
- Use an AC adapter that is of the power and voltage specified for exclusive use with this product. The use of an AC adapter other than that specified exclusively for use with this product may cause fire or electric shocks.
- If the camera emits smoke or a strange smell, or in the event of any other irregularity, stop using the camera immediately, remove the battery or unplug the AC adapter, and contact your nearest PENTAX Service Center. Continued use of the camera may result in fire or electric shock.
- During thunderstorms, unplug and discontinue use of the AC adapter. Continued use could cause equipment failure, a fire, or electric shock.



Caution

- Never try to disassemble or short the battery. Also, do not dispose of the battery in a fire, as they may explode.
- Do not charge any battery other than rechargeable lithium-ion battery D-LI95. The battery could explode or catch fire.
- Do not place your finger on the flash when it is discharging as there is a risk of burns.
- Do not discharge the flash while it is touching your clothing as there is a risk of discoloring of the clothing.
- If any leakage from the battery should come in contact with your eyes, do not rub them. Flush your eyes with clean water and get medical attention immediately.
- If any leakage from the battery should come in contact with skin or clothes, wash the affected areas thoroughly with water.

- Precautions for D-LI95 Battery Usage:
 - BATTERY MAY EXPLODE OR FIRE IF MISTREATED.
 - DO NOT DISASSEMBLE OR DISPOSE OF IN FIRE.
 - DO NOT CHARGE EXCEPT SPECIFIED CHARGING CONDITION.
 - DO NOT HEAT ABOVE 140 °F/60 °C, OR SHORT CIRCUIT.
 - DO NOT CRUSH OR MODIFY.
- Remove the battery from the camera immediately if it becomes hot or begins to smoke. Be careful not to burn yourself during removal.
- Some portions of the camera heat up during use, so please take care, as there is a risk of low temperature burns if such portions are held for long periods of time.
- Should the liquid crystal display be damaged, be careful of glass fragments. Also, be careful not to allow the liquid crystal to get on your skin or in your eyes or in your mouth.
- Depending on your inherent factors or physical condition, the use of the camera may cause itching, rashes or blisters. In case of any abnormality, stop using the camera and get medical attention immediately.

About the AC Adapter



Caution

- Do not place heavy objects on the AC plug cord, allow heavy objects to drop onto it or allow the AC plug cord to become damaged due to excessive bending. If the AC plug cord becomes damaged, consult a PENTAX Service Center.
- Do not short or touch the output terminals of the product while it is still plugged in.
- Do not plug in the AC plug cord with wet hands. This can cause an electrical shock.
- Do not subject the product to strong impacts or allow it to drop onto a hard surface. This can cause a malfunction.

Care to be Taken During Handling

- Take the Worldwide Service Network listing that is included in the package with you when traveling. This will be useful if you experience problems abroad.
- When the camera has not been used for a long time, confirm that it is still working properly, particularly prior to taking important pictures (such as at a wedding or during traveling). Contents of the recording cannot be guaranteed if recording, playback or transferring your data to a computer, etc. is not possible due to a malfunction of your camera or recording media (memory card), etc.

- The lens on this camera is not interchangeable. The lens is not removable.
- Do not clean the product with organic solvents such as thinner, alcohol or benzene.
- Places of high temperature and humidity should be avoided. Particular care should be taken regarding vehicles, which can become very hot inside.
- Storing the camera where pesticides and chemicals are handled should be avoided. Remove from case and store in a well-ventilated place to prevent the camera from becoming moldy during storage.
- As this camera is not waterproof, do not use the camera where it may come in contact with rain, water or any other liquid.
- Ensure that the camera is not subjected to substantial vibrations, shocks or pressure as this may cause damage or malfunction. Place the camera on a cushion for protection when the camera is subjected to the vibrations of a motorbike, car, ship, etc. If the camera is subjected to substantial vibrations, shocks or pressure, take your camera to your nearest PENTAX Service Center and have it checked.
- The temperature range in which the camera can be used is 0°C to 40°C (32°F to 104°F).
- The liquid crystal display will become black at a high temperature but will return to normal when normal temperatures are returned to.
- The response speed of the liquid crystal display becomes slow at low temperatures. This is due to the properties of the liquid crystal and is not a fault.
- Periodic checks are recommended every 1 to 2 years in order to maintain high performance.
- If the camera is subjected to rapid temperature changes, condensation may form on the inside and outside of the camera. Therefore put the camera in a bag or plastic bag, and take the camera out when the difference in temperature has subsided.
- Be careful not to allow dirt, mud, sand, dust, water, toxic gases or salt to enter the camera as this may damage the camera. Wipe away any raindrops or water droplets and allow the camera to dry.
- Please note that formatting a memory card or internal flash memory will delete all data; however it may still be possible to recover that data using off-the-shelf data recovery software. Please manage your camera memory at your own risk.
- Please do not press forcefully on the display. This could cause breakage or malfunction.
- Be careful not to sit down with the camera in your back pocket as this may damage the exterior of the camera or the display.
- When using a tripod with the camera, be careful not to over tighten the screw in the tripod socket on the camera.

Introduction

Congratulations on the purchase of your new digital camera. This manual provides step-by-step instructions on how to use your camera, and is intended for your reference only.

System Requirements

In order to get the most out of your camera, your computer must meet the following system requirements:

- OS: Windows 2000/XP/Vista
- Memory: 128 MB or above
- HDD space: 40 MB or above
- USB port

Package Contents

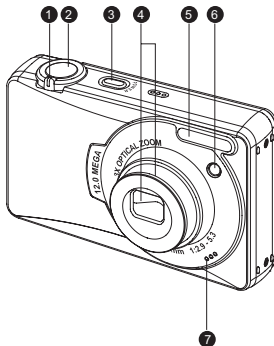
Check the contents of your camera package. It should contain:

- Digital camera
- USB/AV 3-in-1 cable
- Wrist strap
- One Li-ion battery
- Adapter
- Quick start guide for all regions
- Bundled CD-ROM (Application Software and User's Manual)

Main Features

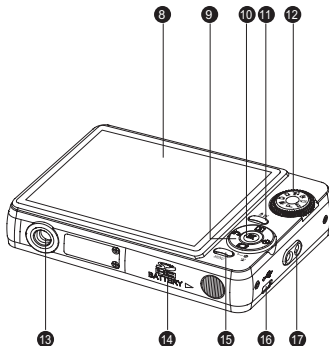
- 12 mega pixels resolution
- 15x zoom (Up to 3x optical zoom and 5x digital zoom)
- 1/2.33 inch CCD image sensor
- 3.0 inch TFT LCD monitor
- 32 MB internal flash memory; support SD/SDHC memory card up to 16GB
- Sleek and slim design
- Easy-to-use button interface

Camera Views



Front View

- | |
|-------------------|
| 1. Zoom switch |
| 2. Shutter button |
| 3. POWER button |
| 4. Zoom Lens |
| 5. Flash |
| 6. Self-timer LED |
| 7. Microphone |



Rear View

- | |
|---------------------------------|
| 8. LCD screen |
| 9. 4-way navigation buttons |
| 10. OK button |
| 11. Delete/Anti-shake button |
| 12. Mode dial |
| 13. Tripod mount |
| 14. Battery/SD card compartment |
| 15. Menu button |
| 16. USB/AV port |
| 17. Wrist strap loop |

The Mode Dial

The camera is equipped with a convenient **Mode Dial** that allows you to switch between different modes with ease. The function of each mode is as follows:

Mode Type	Icon	Function
Auto		Switch to select Auto mode.
Auto Scene		Switch to select Auto Scene mode.
P-Mode (Program Mode)		Switch to select Program mode.
Panorama		Switch to select Panorama mode.
SCENE		Switch to select SCENE mode. Here you can set a pre-programmed Scene mode.
Macro		Switch to enable Macro mode.
Video		Switch to select Video mode.
Playback		Switch to select Playback mode to review photos/videos/audio clips saved in the internal memory or on the memory card.

Buttons and Navigation Pad

Your camera is equipped with an Delete/Anti-shake () button, a menu button, and a navigation pad. The four-way navigation buttons and the **OK** button allow you to access the various options available from the On Screen Display (OSD) menu. You can configure a wide range of settings to ensure maximum results from your photos and videos. Further functions of these buttons are as follows:

Icon	Button	Function
	Delete/Anti-Shake	- In Capture mode: - Press to enable anti-shake function - Press to delete the captured image or video when using Quick Review (QUICK VIEW QV has to be set "ON" at SETUP  mode.) - In Playback mode: - Press to display the Delete menu
MENU	Menu	Opens or exits the OSD menus.
OK	OK	- Confirms a selection when using the OSD menus. - In Capture mode: - Press to enable AF area selection when Selected Area is selected in Focus Zone submenu - In Playback mode: - Press to start and pause the audio/video playback - Press to stop the voice memo playback
	Up/Flash	- Moves up in the OSD menus. - In Capture mode: - Press to pan up in AF area selection - Scroll through the flash mode options (Auto, Off, Fill and Red-eye Reduction) - In Playback mode: - Press to pan up in magnify/crop mode - Press to move up in the thumbnail display

Icon	Button	Function
	Right/Self-timer/ Burst mode	- Moves right in the OSD menus. - In Capture mode: - Press to pan right in AF area selection - Press to scroll through the Self-timer/Burst/M-Burst mode - In Video mode: - Press to scroll through the Self-timer options - In Playback mode: - Press to pan right in magnify/crop mode - Press to move right in the thumbnail display - Press to navigate to next image in single up - Press to fast forward video/audio playback
  	Down/Screen	- Moves down in the OSD menus. - In Capture mode: - Press to pan down in AF area selection - Press to enable the following functions: full icon, full icon with histogram, face detection, smile detection, and simple display (hide all icons except the mode icon and focus bracket). Press again to turn all icons back on the LCD screen. Note: Face and smile detection functions are not available in Macro, Panorama, Sport, Landscape, Night Landscape, Foliage, Aquarium, Fireworks and Copy modes. - In Video mode: - Press to turn off extra icons on the LCD screen, press again to turn all icons back on the LCD screen - In Playback mode: - Press to pan down in magnify/crop mode - Press to move down in the thumbnail display - Press to show the file information

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Icon	Button	Function
	Left/ Quick Review	1. Moves left in the OSD menus. 2. Goes up to the previous level in the OSD menus. 3. In Capture mode: • Press to pan left in AF area selection • Press to display the previously captured photo 4. In Video mode: • Press to display the first frame of the last video recorded 5. In Playback mode: • Press to pan left in magnify/crop mode • Press to move left in the thumbnail display • Press to navigate to previous image in single up • Press to fast rewind video/audio playback

LED Indicators

LED	LED Status	Camera Status
Power/Flash LED	Off	Power Off.
	Blue (steady)	Ready to take pictures.
	Blue (blinking)	Camera busy.
Self-timer LED	Off	Self-timer off.
	Orange (blinking) (10 sec)	Timer count down, flash after 10 seconds.
	Orange (blinking) (2 sec)	Timer count down, flash after 2 seconds.

LCD screen

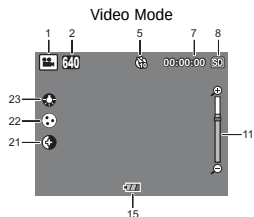
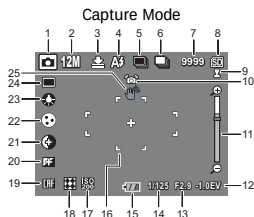
The high resolution 3.0" TFT LCD screen shows all important information regarding camera settings as well as the visual image for your photo or video.

Use the **Mode Dial** to switch between screen modes. Press the **Screen I/O** button to switch between a **Full** display (all icons with histogram, face detection or smile detection), or a **Simple** display (only mode icon and focus area are shown while other icons are hidden).

Capture/Video Mode Display

1. Mode indicator	
Auto	
Auto Scene	
P-Mode	
Panorama	
SCENE	
Sport	
Landscape	
Night Landscape	
Portrait	
Self Portrait	
Night Portrait	
Museum	
Snow	
Sunset	
Firework	
Beach	
Party	
Foliage	

Aquarium	
Kids & Pets	
Copy	
Backlight	
Audio	
Marco	
Video	
Playback	

2. Image Resolution	
12M	12M
10M	10M
8.9M 3:2	3:2
8M	8M
5M	5M
3M	3M
2.1M 16:9	16:9
2M	2M
VGA	VGA


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3. Image Quality	
Best	
Better	
Good	
4. Flash	
Auto Flash	
Flash Off	
Fill Flash	
Red-eye Reduction	
5. Self-Timer/Burst Mode	
Self Timer	
10 Seconds	
2 Second	
Burst Mode	
M-burst Mode	
6. Auto Exposure Bracketting	
AEB Mode	
7. Image Counter	
Capture Mode	
Quantity	9999
Video Mode	
Time	00:00:00
8. Memory Interface	
SD Card	
Internal Memory	
9. Date Stamp	

10. Anti-Shake	
11. Zoom Bar	
12. EV Compensation	
	-2.0EV ~ +2.0EV
13. Aperture Value	
14. Shutter Speed	
	2 ~ 1/2000
15. Battery Indicator	
Battery Full	
Battery Medium	
Battery Low	
Battery Insufficient	Blinking
16. AF Frame	
17. ISO Speed	
Auto	
ISO 80	
ISO 100	
ISO 200	
ISO 400	
ISO 800	
ISO 1600	
ISO 3200	
18. Focus Zone	
Multi-Zone	

Center	
Selected Area	
19. CONTINUOUS AF	
20. Sharpness	
High	
Normal	
Low	
21. Contrast	
High	
Normal	
Low	
22. Saturation	
High	
Normal	
Low	
23. White Balance	
Auto	
Sunny	
Tungsten	
Fluorescent	
Cloudy	
24. AE Metering	
Matrix	
Center Weighted	
Spot	
25. Camera Steady Warning	

Camera Setup

Attaching the Wrist Strap

Follow these instructions to attach the wrist strap to your camera to facilitate easy carrying:

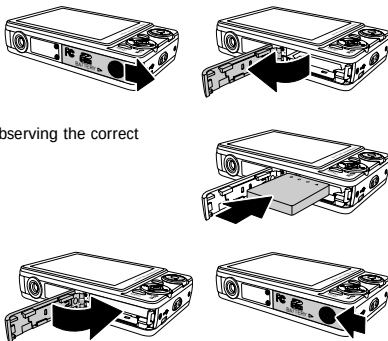
1. Insert the short loop of the strap in the strap eyelet.
2. String the larger loop of the strap through the short loop and pull tight to attach the strap to the camera.



Inserting the Battery

Follow these instructions to insert the Li-ion battery into the battery compartment.

1. Open the battery compartment at the bottom of the camera.
2. Insert the battery into the compartment observing the correct polarity.
3. Close the battery compartment.

**Note:**

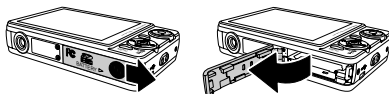
The Li-ion battery should be fully charged more than 4 hours before using for the first time.

Inserting an SD/SDHC Memory Card

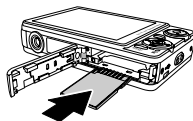
The camera features 32 MB internal flash memory but you may also use an optional SD/SDHC memory card for additional storage.

Follow these instructions to insert the SD/SDHC card.

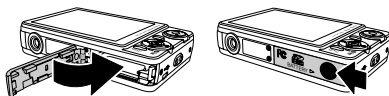
1. Open the battery compartment at the bottom of the camera.



2. Insert the SD/SDHC card into the memory card slot as shown.



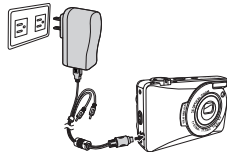
3. Close the battery compartment.



To remove the SD/SDHC card, gently push the card until it pops out. Pull out the card carefully.

Charging the Battery

1. Insert the battery into the camera and connect the USB/AV 3-in-1 cable with the AC adapter as shown in the picture.
2. Connect the AC adapter to a live household outlet to start charging. The power LED will blink during the charging process.
3. Disconnect the USB/AV 3-in-1 cable when the charging is done. When the charging is done, Power LED still turns on.



Charging the Battery with USB power

1. Turn the power off and connect the USB/AV 3-in-1 cable with the camera and the computer.
2. The power LED will blink during the charging process.
3. The Power LED will keep steady blue when charging is done.
4. Disconnect the USB/AV 3-in-1 cable.

Note:

1. The room temperature suitable for charging the camera is 6°C ~ 33°C. Power LED blinks during the charge and keep steady blue automatically after the charge.
2. The battery will not be charged when the room temperature is above 33°C or below 6°C. Also, Power LED will not blink. The battery will be continually charged till the temperature is between 6°C ~ 33°C.

Turning On

Press and hold the **POWER** button to turn on the camera. To turn off the camera, press the **POWER** button again.

First Time Use

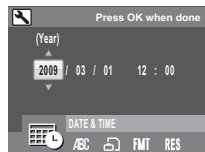
Press the **POWER** button as described in "Turning On" on page 11, a welcome screen displays on the LCD screen.



If the camera is turned on for the first time, the **Language** menu pops up automatically after powering on the camera. Press the **OK** button and select the desired language by **Up / Down** navigation buttons, then press the **OK** button to confirm.



After the desired language is selected, the **Date and Time** menu pops up. Press the **OK** button. Select each field and adjust the value using the navigation buttons. Press the **OK** button to confirm.



Note:

If the **Date and Time** is reset (when running out the battery and not in use for a long period), the **Date and Time** setup screen displays automatically.

Getting Started

Now that you are familiar with the layout of your camera, you are ready to start taking photos and movies.

Taking your First Photo

Taking a photo with the camera is very simple.

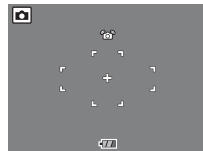
1. Turn the camera on and turn the **Mode Dial** to **Auto**  mode.
2. Frame the shot on the LCD screen and press the **Shutter** button halfway. The camera automatically adjusts the focus and exposure. The focus bracket turns green when ready.
3. Press fully and hold the **Shutter** button to capture the image.

When a camera steady warning icon  appears, hold the camera as still as possible, as a longer exposure time (more than 1/40 second) is required.

Anti-Shake Function

This function is only available in **Auto**  capture mode. Press the

 button to enable the Anti-Shake function, and press again to disable it. An **Anti-Shake** icon  displays on the LCD screen when the function is activated.



Using Quick Review

To delete a photo when using Quick Review:

1. Press the **Left/Quick Review**  navigation button.
2. Press the  button, a confirmation screen is displayed. Select **THIS IMAGE** to delete the photo or **CANCEL** to keep it.
3. Press **OK** to confirm your selection.

You can also delete photos from the Playback menu. See "Deleting Photos/Videos/Audios" on page 32 for more detailed information.

Using Macro Mode

Macro mode is designed for close-up photography and can capture all detail even when your subject is very close to the camera. Turn the **Mode Dial** to **Macro**  mode. The Macro icon  displays on the LCD screen.

Setting the Flash Mode

You can choose from four flash modes to suit various lighting conditions.

Press the **Up/Flash**  navigation button to scroll through the four modes on the LCD screen. The flash setting remains the same for subsequent photos until you change it as described above.



Auto flash: The flash fires automatically when needed.



Flash off: The flash is turned off.



Fill flash: The flash always fires.



Red-eye Reduction: The flash fires twice so as to reduce the red-eye effect.

Using the Zoom in/out Function

The camera comes equipped with 3x optical zoom and 5x digital zoom that allows you to zoom in on your subject.

To use the zoom:

1. Slide the **Zoom switch** to the right  to zoom in on your subject.
2. Slide the **Zoom switch** to the left  to zoom out from your subject.

Using the Self-timer and Burst Photography

The camera comes equipped with a self-timer which allows you to take photos after a pre-defined delay. The burst photography feature allows you to take multiple consecutive photos by pressing and holding the **Shutter** button. The multi-burst photography feature allows you to take multiple (16) consecutive VGA photos by pressing the **Shutter** button once.

To set the self-timer/burst mode:

1. Press the **Right/Self-timer**  / **Burst Mode**  navigation button to cycle through the self-timer ( or ) and burst photography options ( or ) on the LCD screen.
2. Once you have selected an option, frame and take your shot. In self-timer mode, the icon will flash until the time expires and the photo is taken.
3. After taking a photo, the Self-timer automatically exit. If you want to use these functions for the next photo, press the **Right/Self-timer**  / **Burst Mode**  navigation button again to activate the function.

Note:



Burst Mode

Take photos until shutter is released.



Multi-Burst Mode

16 photos continuously by 1 press of the Shutter button.

Using Auto Scene Mode

When **Auto Scene** mode is enabled, the camera will automatically detect the proper scene modes you may want to switch, such as Portrait, Landscape, Night Portrait, Night Landscape, Backlight, Copy, Macro, Foliage. However, the image resolution and quality, and the exposure compensation are still controllable in this function.

1. Turn **Mode Dial** to **Auto Scene**  mode.
2. The detected scene icon will be displayed on the LCD.

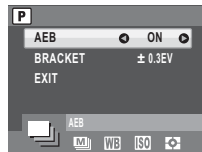


Using the AEB (Auto Exposure Bracketing) Function

When using the **AEB (Auto Exposure Bracketing)** function, the camera automatically takes 3 consecutive photos with different exposures by pressing the **Shutter** button once. For example, when the current EV compensation value is +0.3 EV and the AEB bracket interval value is set to ± 0.3 , the camera takes shots of the same scene with 3 varying levels of exposure: -0.3 EV, 0 EV and +0.3 EV.

This function is only available in **Auto**, **P-Mode** and **Macro** modes. To set the AEB mode:

1. Press the **MENU** button to display menu options.
2. Press the **Left/Right** navigation buttons to select **AEB** setting.
3. Press the **Up/Down** navigation buttons to select from the available options:
 - **AEB**: Select to enable (ON) or disable (OFF) the AEB function.
 - **BRACKET**: Select to set the bracket interval value ranging from ± 0.3 to ± 2.0 EV in 0.3 or 0.4 EV increments.
 - **EXIT**: Select to apply new settings to the camera and return to the setup menu.

**Note:**

1. When taking AEB shots, hold the camera steadily. For the best result, use the tripod.
2. Flash, Burst, and M-Burst modes are not allowed when the AEB function is enabled.

Setting the Scene Mode

The camera supports various preset modes for shooting in different environments and conditions. Each setting is configured automatically by the camera.

To select scene modes:

1. Turn the **Mode Dial** to **SCENE** mode to display the Scene menu options.
2. Use the navigation buttons to scroll through the modes:

• Sport	• Fireworks
• Landscape	• Beach
• Night Landscape	• Party
• Portrait	• Foliage
• Self-Portrait	• Aquarium
• Night Portrait	• Kids&Pets
• Museum	• Copy
• Snow	• Backlight
• Sunset	• Audio
3. Press **OK** to confirm your selection.



Face and Smile Detection AF/AE Function

The face () and smile () detection functions can be toggled on and off with each press of the **Down/Screen** navigation button in most capture modes. When the subject's face/ smile is detected, the white bracket appears to track faces/smiles while the camera or people are moving.

When the **Shutter** button is pressed halfway, the green focus frames appear on the LCD screen. Then the camera automatically adjusts the focus point and exposure to the optimized value. Press the **Shutter** button all the way to take pictures with detected face. When a detected face smiles, the shutter automatically fires.



18 Getting Started

However, when the camera fails to detect your subject's face, a white focus bracket will be displayed according to the selected focus mode.

To disable the smile detection function, press the **Down / Screen**  navigation button again.

Using the Self Portrait Mode

The up-to-date Self Portrait function allows you to take self-portrait shots. When enabling the Self Portrait function, a white detection frame will appear and track your face automatically. After focus on, it will take a shot without pressing the **Shutter** button.

To take a self-portrait shot:

1. Press the **SCENE** button and select  **Self Portrait** mode, and then press the **OK** button to confirm. The Self Portrait icon  displays on the LCD screen.
2. Turn the camera lens toward your face.
3. The camera will automatically take a picture. This function is available in any flash mode.



Note:

1. The **Shutter** button, **Macro** mode, **Self-timer** and **Burst** functions could not work when enable the **Self Portrait** mode. Also, the **DOWN** navigation button is only for switching between **Simple** and **Face** modes.
2. The white focus frame only works within the effective yellow frame.

Taking Panoramic Pictures

Panorama mode allows you to shoot ultra wide panoramic shots. You can create wide-view photos by stitching three images into a single panoramic scene.

To take a panoramic picture:

1. Turn the **Mode Dial** to **Panorama**  mode. The Panorama icon  displays on the LCD screen.
2. You can take panoramic shots in either left-to-right () or right-to-left () sequence. Press the **Up/Down** navigation buttons to select the direction in which the sequence will be taken. Then press the **OK** button.
3. Frame the first view on the LCD screen and press the **Shutter** button. The frame record icon is displayed to indicate the location of frame is going to take for the panorama image.
4. After a quick preview, the LCD screen shows an overlay from the first picture.
5. Capture the second and third views as taking the first view, making sure that the edges of pictures overlap.
6. You can press the  button to retake the picture. If you are taking only two pictures, press the **OK** button to stitch them together.
7. After you take three pictures, the camera will automatically stitch them together into one panorama shot.



8. Turn the **Mode Dial** to **Playback**  mode to view the result.



Recording your First Video

You can also record video clips with the camera.

To record a video clip:

1. Turn the camera on and turn the **Mode Dial** to **Video**  mode.
2. Frame your subject using the LCD screen and press the **Shutter** button to start recording. The self-timer LED is steady on to indicate recording is in progress.
3. Press the **Shutter** button again to stop recording. If not, recording will continue until all free memory space is used.
4. In playback mode, press the **OK** button to playback the recording. Press the / button to delete the recording if needed.

Recording Audio Files

You can also record audio files with the camera.

To record an audio file:

1. Turn the **Mode Dial** to **SCN** mode and select the **Audio**  mode with 4-way navigation button.
2. Press the **Shutter** button to start recording. A counting up timer will be displayed during audio recording.
3. Press the **Shutter** button again to stop recording. If not, recording will continue until all free memory space is used.
4. Start recording screen is displayed after recording is stopped.
5. In playback mode, press the **OK** button to playback the recording. Press the / button to delete the recording if needed.

Recording Voice Memos

You can add a **20 sec** voice memo to an image right after it's taken.

To record a voice memo:

1. Hold the **Shutter** button to start recording and release the **Shutter** button to stop recording.
2. While recording, the taken image is shown on the LCD screen.
3. The elapsed time screen shows the length of a voice memo.

Note:

A Voice Memo can also be added in Playback mode.

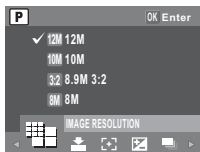
Capture Settings

This section describes the various settings you can modify to get better results when taking photos and video clips.

The Capture Menu

To access the Capture menu:

1. Turn the **Mode Dial** to select a desired image capture mode.
2. Press the **MENU** button to display menu options and use the **Left/Right** navigation buttons to select the function you need, then press the **OK** button to enter the selection function.
3. Press the **Up/Down** navigation buttons to highlight an option and press the **OK** button to confirm.



Refer to the following sections for more detailed information about each setting.

Note:

All the options in this section may vary according to the different modes.

Image Resolution

The **Image Resolution** setting refers to the size of the image in pixels. Use the **Up/Down** navigation buttons to select from the options.

9 settings for image resolution are available:

- 12M (4000 x 3000)
- 10M (3664 x 2748)
- 8.9M 3:2 (3664 x 2442)
- 8M (3264 x 2448)
- 5M (2576 x 1932)
- 3M (2048 x 1536)
- 2.1M 16:9 (1920 x 1080)
- 2M (1600 x 1200)
- VGA (640 x 480)

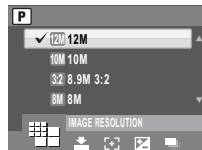
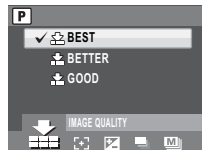


Image Quality

The **Image Quality** setting refers to the compression ratio of the JPG. The higher image quality, more memory space is required. Use the **Up/Down** navigation buttons to select from the options. 3 settings for image quality are available:

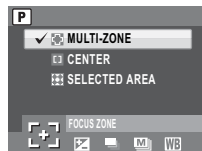
- BEST (default)
- BETTER
- GOOD



Focus Zone

The **Focus Zone** setting allows you to select the number of zones the camera will focus on when taking a photo. Use the **Up/Down** navigation buttons to select from the options. 3 settings for focus zone are available:

- MULTI-ZONE (default)
- CENTER
- SELECTED AREA: When this option is set, press the **OK** button to enable AF area selection. The new setting is applied to the Live View image each time navigation buttons are pressed. Press the **OK** button to return to the capture mode and save the current setting, which will take effect until it is changed again.



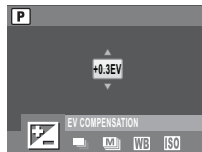
Note:

In Auto Mode, there is no "Selected Area" item.

EV Compensation

The **EV Compensation** menu allows you to adjust the exposure or amount of light that enters the lens while capturing photos or videos. Use this feature to lighten or darken the image when the brightness between the subject and background is not balanced or when the subject occupies only a small part of the photograph. Use a positive (+) EV compensation for spotlight subjects, especially against dark backgrounds or scenes with low reflectivity, such as green or dark foliage.

Use the **Up/Down** navigation buttons to modify the value. This setting can be modified from -2.0 to +2.0 in a 0.3/0.4 increment/decrement.



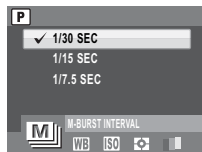
AEB

See "Using the AEB (Auto Exposure Bracketing) Function" on page 16 for more detailed information.

M-Burst Interval

The **M-Burst Interval** setting allows you to adjust the burst interval when the multi-burst function is enabled. Use the **Up/Down** navigation buttons to select from the options. 3 settings for M-Burst Interval are available:

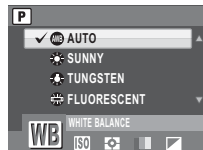
- 1/30 SEC (default)
- 1/15 SEC
- 1/7.5 SEC



White Balance

The **White Balance** setting allows you to adjust the camera setting according to the ambient white light when shooting. White balance represents the degree of coolness of the light. If the light has a yellowish or reddish tinge, it is said to be warm; if it has a bluish tinge, it is said to be cool. You can select the setting and preview it on screen before confirming your choice. Use the **Up/Down** navigation buttons to select from the options. 5 white balance settings are available:

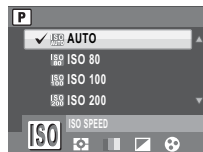
- AUTO (default)
- SUNNY
- TUNGSTEN
- FLUORESCENT
- CLOUDY



ISO Speed

The **ISO Speed** setting allows you to adjust the CCD light-sensitivity. Use the **Up/Down** navigation buttons to select from the options. 8 ISO settings are available:

- AUTO (default)
- ISO 80
- ISO 100: For outdoor photography in bright sunlight.
- ISO 200: For outdoor or indoor photography in bright light.
- ISO 400: For indoor photography or low light environments.
- ISO 800: For moving object photography or low light environments without using flash.
- ISO 1600: For moving object photography or low light environments without using flash
- ISO 3200: For moving object photography or low light environments without using flash



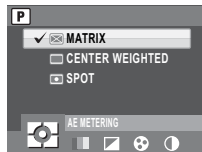
Note:

ISO 3200: Only capture at 3M image resolution when you select ISO 3200. If you wish to select larger image resolution, ISO will go to default setting at Auto ISO.

AE Metering

The **AE Metering** allows you to select the area of the subject or frame by which the camera measures light. Use the **Up/Down** navigation buttons to select from the options. 3 AE metering settings are available:

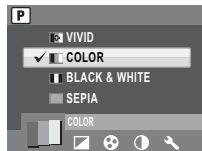
- **MATRIX** (default): Camera metering is set for evaluating 16 zones of objects with intelligent weighting in the frame.
- **CENTER WEIGHTED**: The metering puts more emphasis on the center of the image while still looking at the entire scene.
- **SPOT**: Camera metering is set for the brightness of a single object in the center of the frame.



Color

The **Color** setting allows you to take photos and apply different colors or color tones for an artistic effect. Use the **Up/Down** navigation buttons to select from the options. 4 color settings are available:

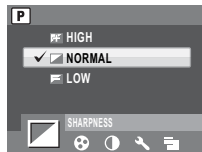
- **VIVID**
- **COLOR** (default)
- **BLACK & WHITE**
- **SEPIA**



Sharpness

The **Sharpness** setting allows you to enhance the finer details of your photos. Use a higher setting for very sharp photos and a lower setting for a soft-toned photo. Use the **Up/Down** navigation buttons to select from the options. 3 sharpness settings are available:

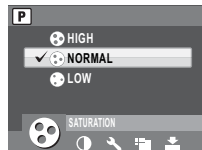
- **HIGH**
- **NORMAL** (default)
- **LOW**



Saturation

The **Saturation** setting allows you to adjust the saturation of the colors in your photos. Use a high saturation setting for rich colors and a lower saturation setting for more natural tones. Use the **Up/Down** navigation buttons to select from the options. 3 saturation settings are available:

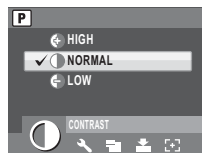
- HIGH
- NORMAL (default)
- LOW



Contrast

The **Contrast** setting allows you to adjust the contrast of your photos. Use the **Up/Down** navigation buttons to select from the options. 3 contrast settings are available:

- HIGH
- NORMAL (default)
- LOW



Setup

See "The Setup Menu" on page 40 for more details on the setup menu options.

Video Capture Menu

To access the video menu:

1. Turn the **Mode Dial** to **Video**  mode.
2. Press the **MENU** button to display the menu options.
3. Use the **Left/Right** navigation buttons to highlight an option and press the **OK** button to enter the submenu. Refer to the following sections for more detailed information about each setting.

Video Resolution

The **Video Resolution** setting allows you to adjust the resolution at which your videos are recorded. 3 video size settings are available:

- 1280X720
- 640X480
- 320X240



White Balance

See “White Balance” on page 25 for more details on the setup menu options.

Color

See “Color” on page 26 for more details on the setup menu options.

Saturation

See “Saturation” on page 27 for more details on the setup menu options.

Contrast

See “Contrast” on page 27 for more details on the setup menu options.

Setup

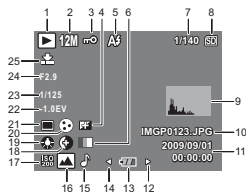
See “The Setup Menu” on page 40 for more details on the setup menu options.

Photo, Video & Audio Playback

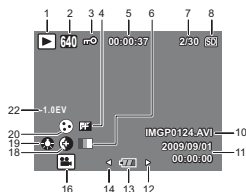
Playback Mode Display

1. Playback mode	
2. Image resolution	Photo mode: 12M 10M 8.2 6M 5M 3M 169 2M VGA Video mode: HD (1280x720), 640 (640x480), 320 (320x240)
3. Protect	
4. Sharpness	
5. Flash mode	Photo mode: Video mode: 00:00:00 (Length of the video clip.)
6. Color mode	
7. Quantity	1/140, 2/30
8. SD card / Internal memory	
9. Histogram	
10. File Name	Photo mode: IMGP0123.JPG Video mode: IMGP0124.AVI
11. Date and Time	2009/09/01 00:00:00
12. Next	Move to next image.
13. Battery status	
14. Previous	Move to previous image.
15. Voice memo	
16. Mode icons	Please see "Capture/Video Mode Display" on page 7 for detailed information.

Photo Playback



Video Playback



17. ISO Speed	
18. Contrast	
19. White balance	
20. Saturation	
21. AE Metering	
22. EV Compensation	+2.0EV ~ -2.0EV
23. Shutter speed	1/2000 sec. ~ 2 sec.
24. Aperture value	
25. Image quality	

Viewing Photos/Videos on the LCD Screen

To view your photos and video files on the LCD screen:

1. Turn the **Mode Dial** to **Playback**  mode. The most recent photo or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through photos and video clips.
3. Press the **OK** button to begin playback of a video clip.
4. Press the **Left/Right** navigation buttons at any time during playback to skip to the previous/next photo or video.
5. Press the **OK** button and press the **Left/Right** navigation buttons to fast-rewind/fast-forward during video playback.
6. Press the **OK** button at any time during playback to pause the video.
7. After the video clip finishes playing, the LCD screen displays the first frame of the clip.

Viewing M-Burst Photos

To view your multi-burst photos on the LCD screen:

1. Turn the **Mode Dial** to **Playback**  mode. The most recent photo or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through photos.
3. When reviewing a multi-burst image, it will be displayed from the 1st frame to the 16th frame at 2 frames/per second like a slideshow.
4. To stop the M-Burst slideshow, press **Left/Right** navigation buttons and skip to the previous/next image.

Listening to Audio Files

To listen to audio files:

1. Turn the **Mode Dial** to **Playback**  mode. The most recent photo, audio or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through the files.
3. Press the **OK** button to begin playback of an audio file.
4. Press the **Left/Right** navigation buttons at any time during playback to skip to the previous/next audio file.
5. Press the **OK** button and press the **Left/Right** navigation buttons to fast-rewind/fast-forward during audio playback.
6. Press the **OK** button at any time during playback to pause.

Listening to Voice Memo

A voice memo plays simultaneously when playing a saved image with voice memo.

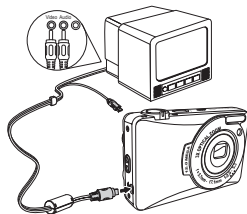
To stop a voice memo while reviewing an image, press **OK** button.

To skip to previous/next image, press **Left/Right** navigation buttons.

Viewing Photos/Videos on your TV

To view images stored on the camera on your TV, you must connect via the USB/AV (•◀▶) port on the side of the camera. To connect your camera to a TV:

1. Turn on the camera and make sure that the camera's video out format is set to the same as that of the TV. See "Video Out" on page 43 for more information.
2. Connect the USB/AV 3-in-1 cable to the **USB•◀▶/AV** port on the camera.
3. Connect the other end of the cable to the TV's AV input port.
4. The LCD screen turns blank and all images and video clips are displayed on the TV screen. Follow the same steps described in "Viewing Photos/Videos on the LCD Screen" on page 30.



Zooming In During Playback

The camera's zoom feature can also be used during playback. This allows you to view photos in greater detail.

To zoom in on saved photos:

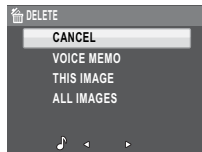
1. Slide the **Zoom In** (◀) and **Zoom Out** (▶) switches to zoom in and out of the photo/video.
2. Use the navigation buttons to pan across the image.
3. When zoomed in on a photo, press the **OK** button to crop the image. When zoomed out to the maximum, the LCD screen will display all photos and videos as a series of thumbnails.

Deleting Photos/Videos/Audios

The **Delete** function allows you to remove unwanted files stored on internal memory or a memory card.

To delete a photo/video/audio:

1. Press the  button to display the **Delete** menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the available options:
 - **CANCEL**: Select to cancel the action and exit to the main menu.
 - **VOICE MEMO** (only available for images with voice memos attached): Select to delete the voice memo.
 - **THIS IMAGE/VIDEO/AUDIO**: Select to delete the current image/video/audio.
 - **ALL IMAGES**: Select to delete all images.

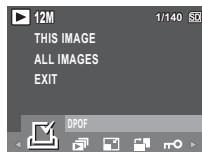


Using the Playback Menu

Access the Playback menu to view further information, configure printing settings, view a slideshow, or delete photos or movies.

To access the Playback menu:

1. Turn the **Mode Dial** to select **Playback**  Mode.
2. Press the **MENU** button to display the menu options.
3. Use the **Left/Right** navigation buttons to highlight an option and press the **OK** button to confirm.



DPOF

DPOF (Digital Print Order Format) allows you to specify the number of copies of a certain image that you want to print at a later date.

Use this function to tag pictures stored in your memory card with print information. You can tag all pictures to be printed or just the current picture. You can also select how many copies print.

When all images to be printed are tagged, remove the memory card and take it to a photographic shop for printing, or use it with a DPOF compatible printer.

To set DPOF:

1. Press the **MENU** button to select **DPOF** from the menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the available options:
 - **THIS IMAGE**: Select to print the current image.
 - **ALL IMAGES**: Select to print all images.
 - **EXIT**: Select to exit to the main menu.
3. Use the **Up/Down** navigation buttons to set the number of copies you wish to print.

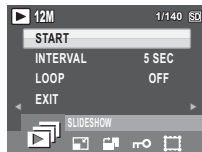


Slideshow

The **Slideshow** function allows you to view all stored photos in a continuous sequence.

To view a slideshow:

1. Press the **MENU** button to select **SLIDESHOW** from the menu, then press the **OK** button to enter the SLIDESHOW function.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the available options:
 - **START**: Select to start the slideshow.
 - **INTERVAL**: Select to set the interval time between each photo during the slideshow. Use the **Left/Right** navigation buttons to set a value in seconds.
 - **LOOP**: Select to enable/disable a continuous loop of the slideshow. Select **On** or **Off** (default) from the submenu.
 - **EXIT**: Select to exit to the main menu.

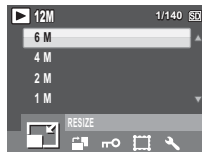


Resize

The **Resize** function allows you to change the image resolution.

To resize a photo:

1. Press the **MENU** button to select **RESIZE** from the menu, then press the **OK** button to enter the Resize function.
2. Press the **Up/Down** navigation buttons and the **OK** button to select the resize ratio you require: 6M, 4M, 2M, 1M, and VGA.
3. Select **EXIT** to return to the main menu.



Note:

It is only possible to scale-down image resolutions. If the current image resolution is VGA, this menu item is disabled in the Resize submenu. The ratio of the image (4:3 or 3:2) remains unchanged after resizing.

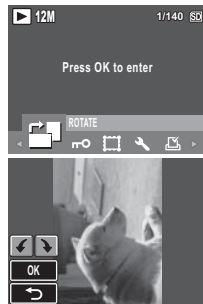
- This function only supports native pictures
- Cropped images cannot be resized
- If there is not sufficient storage space, images cannot be resized
- If the SD/SDHC card is locked, images cannot be resized
- VGA images cannot be resized

Rotate

The **Rotate** function allows you to change the orientation of a saved photo.

To rotate an image:

1. Press the **MENU** button to select **ROTATE** from the menu.
2. Press the **OK** button to enter the edit mode.
3. Press the **Left/Right** navigation buttons to rotate the selected image.
4. Press the **Up/Down** navigation buttons and the **OK** button to confirm or cancel the rotation.
 - **OK**: Confirm selection and save image.
 - : Select to discard the changes and return to the main menu.



Protect

You can lock a photo or video to protect it from being accidentally erased.

To lock a photo or video:

1. Press the **MENU** button to select **PROTECT** from the menu and press the **OK** button to enter.
2. Use the **Up/Down** navigation buttons to select **Lock**  or **EXIT**, then press the **OK** button to confirm the one you needed.
3. A key  icon displays at the top of the screen to indicate the photo/video is now locked.
4. To unlock a photo or video, perform the steps 1 and 2 again.



Frame Composite

The **Frame Composite** function supports 9 various decoration frame types to make your captured pictures more funny. Please note the image resolution of the picture that you want apply the frame needs being higher than 3M.

To add a frame on your picture:

1. Press the **MENU** button to select the **IMAGE RESOLUTION** from menu. Make sure the current resolution is higher than 3M and then press the **OK** button to confirm.
2. After taking pictures, press the **Playback** button and select the image you want to apply a frame.
3. Press the **MENU** button again and use the **Left/Right** navigation buttons to select the **FRAME COMPOSITE** from the menu and then press the **OK** button to confirm.
4. Use the 4-way navigation (**Left/Right/Up/Down**) button to select the frame type you like and press the **OK** button.
5. Press the **OK** button to save the picture as **NEW FILE** or **OVERWRITE** the original one, and then press the **OK** button again.
6. You may press the **MENU** button to return to the previous menu during the operation.



Note:

1. The function is unavailable when the storage space is not enough.
2. All images' size will be changed to 3M after applying the Frame Composite function; even you take the pictures' size higher than 3M.
3. The function does not support cropped or rotated images.

Move

The **Move** function allows you to move images stored in internal memory to a memory card.

To move an image:

1. Press the **MENU** button to select **MOVE** from the menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the 3 available options:
 - **THIS IMAGE**: Select to move the current image to a memory card.
 - **ALL IMAGES**: Select to move all images to a memory card.
 - **EXIT**: Select to exit to the main menu.



Note:

The Move function is only available when you choose internal memory as the storage media and an SD / SDHC card has been inserted into the camera.

Divide

The **Divide** function allows you to cut unnecessary portions of a video. This feature is useful when the memory capacity is insufficient or when users want to trim video clips.

To move an image:

1. Press the **MENU** button to select **DIVIDE** from the menu.
2. Press the **OK** button to enter the edit mode.
3. Use the **Up/Down** navigation buttons to select the portion of the video you want to delete.
 - : Beginning of the new video clip
 - : End of the new video clip
4. Press and hold the **Left/Right** navigation buttons to specify the beginning and end position of the new video clip and release at the frame you want to stop.



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5. Press the **Up/Down** navigation buttons and the **OK** button to select from the following options:

- ▶ : Select to review the trimmed video clip.
- ⏏ : Select to save the trimmed video clip as a new file or overwrite the original video. Select **EXIT** to discard the changes.
- ↶ : Select to return to the main menu.



Note:

The Divide function is only available when a video file is selected. Video clips shorter than one second cannot be edited.

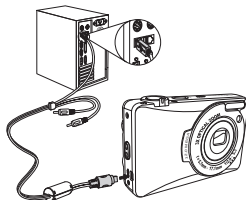
Transferring Photos/Videos to your PC

To transfer photos and videos to your PC:

Connect the camera's  port to a free USB port on your PC using the USB cable.

The camera's internal memory and/or SD/SDHC card appear as removable drives in the file manager. Copy the files from the drives to the directory on your PC.

Use PhotoImpression and VideoImpression (provided on the software CD) to view or edit the photos and videos respectively.



Note:

The USB mode is only available in MSDC.

Camera Settings

The Setup Menu

The setup menu, available in capture and playback modes, allows you to configure the camera's general settings and according to your preferences.

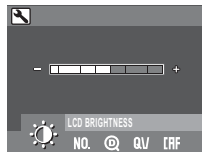
To access the setup menu:

1. Press the **MENU** button when in **Playback** or any of the capture modes.
2. Select **SETUP** from the menu. The submenu appears.
3. Use the **Left/Right** navigation buttons to scroll through the options and press the **OK** button to enter further submenus and to confirm your selection. Refer to the following sections for more detailed information about each setting.



LCD Brightness

The **LCD Brightness** setting allows you to brighten or darken the LCD backlight. Press the **OK** button to enter. Use the **Left/Right** navigation buttons to increase or decrease the brightness.



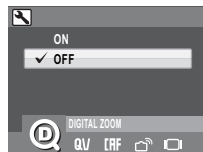
File Number

The **File Number** setting allows you to reset the file number to 0001 when the camera creates a new folder. Otherwise, the next file number will be used. Select **RESET** to reset or **CONTINUE** to set the file numbers in continuous order.



Digital Zoom

The **Digital Zoom** setting allows you to turn the digital zoom function on or off. Press the **OK** button to confirm. Select **ON** to enable the function or **OFF** (default) to disable it.



Quick View

The **Quick View** setting allows you to view the photo that you have just taken. Once you have taken your photo, it displays on the LCD screen. If

you are not satisfied with the result, you can press the  button to delete the photo immediately. Select **ON** (default) to enable the function or **OFF** to disable it.



Note:

The Quick View function is not available in M-Burst modes.

Continuous AF

The **Continuous AF** setting allows you to turn the continuous auto focus function **ON** or **OFF**. Press the **OK** button to enter. Select **ON** to enable the function or **OFF** (default) to disable it.



Camera Sound

The **Camera Sound** setting allows you to adjust the camera sound level. You can also set the start-up and shutter sound when you turn on the camera and press the **Shutter** button. Available options are as follows:

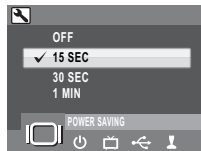
- VOLUME: Off, Low, Normal (default), High
- START-UP: Sound 1 (default), Sound 2, Sound 3
- SHUTTER: Sound 1 (default), Sound 2, Sound 3
- EXIT: Select to exit to the main menu.



Power Saving

The **Power Saving** setting allows you to adjust the length of time that LCD screen turn dim to save battery power. 4 options are available:

- OFF
- 15 SEC (default)
- 30 SEC
- 1 MIN



Auto Power Off

The **Auto Power Off** setting allows you to adjust the length of time after which the camera will power down when inactive. Use **Up/Down** navigation buttons to select from the menu options. 2 options are available:

- 5 MIN (default)
- 2 MIN



Video Out

The **Video Out** setting allows you to adjust the video output, depending on the type of your TV. Use **Up/Down** navigation buttons to select from the menu options. 2 options are available:

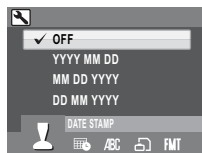
- NTSC
- PAL



Date Stamp

The **Date Stamp** setting allows you to adjust the format in which the date will appear on each photo or video. You can also deactivate this function if you wish. Setting a date stamp allows for easy sorting and the date will appear on the photo when printed. Press the **OK** button to confirm. Use the **Up/Down** navigation buttons to select from the menu options. 4 options are available:

- OFF (default)
- YYYY MM DD: year-month-date format
- MM DD YYYY: month-date-year format
- DD MM YYYY: date-month-year format



Date and Time

The **Date and Time** setting allows you to set or adjust the date and time on your camera. To set or adjust the date and time:

- Press the **Left/Right** navigation buttons to select the **Year** field.
- Press the **Up/Down** navigation buttons to adjust the **Year** value.
- In the same way, select the **Month**, **Date**, **Hour** and **Minute** fields and adjust them accordingly.



Language

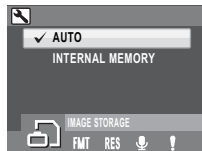
The **Language** setting allows you to choose which language the OSD menu uses. Scroll down the list and select your language. Press the **OK** button to confirm. Use the **Up/Down** navigation buttons to select from the menu options.



Image Storage

The **Image Storage** setting allows you to specify where photos and video clips will be stored. The camera features 32 MB internal memory but you can also insert an SD/SDHC card (see "Inserting an SD/SDHC Memory Card" on page 10 for more details). 2 options are available:

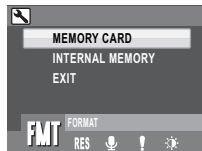
- **AUTO** (default): When selected, the camera chooses the storage medium automatically. If an SD/SDHC card is inserted in the camera, all photos and videos are stored on the card. If an external card is not detected, all photos and videos are stored in the internal memory.
- **INTERNAL MEMORY**: All photos and videos are stored in the internal memory.



Format

The **Format** setting allows you to erase all data in the internal memory or on the SD/SDHC card. Press the **OK** button to confirm. Use the **Up/Down** navigation buttons to select from the menu options. 3 options are available:

- **MEMORY CARD** (default): All data on the SD/SDHC will be formatted.
- **INTERNAL MEMORY**: All data in the internal memory will be formatted.
- **EXIT**: Cancel format action.



Reset

The **Reset** setting allows you to reset the camera to the original factory default settings except date&time, language, and video out format. This means all modifications you have made to the camera settings will be cleared.

Once selected, the **Reset** screen displays a confirmation message. Select **YES** to proceed with the reset or **EXIT** (default) to cancel.



Voice Memo

The **Voice Memo** setting allows you to record a voice memo when a photo is taken or in playback mode. Select **ON** to enable the Voice Memo function or **OFF** (default) to disable it.



Specifications

General

Resolution / Image Type	12M Pixels / 1/2.33" CCD
LCD	3.0" TFT, 230,000 Pixels
Dimensions	90(W)x59(H)x19(D)mm
Exterior Casing	Metal Housing
Weight	Approx. 128g

Optics

Aperture	Wide: F2.9 Tele: F5.3
Optical Zoom	Up to 3x
Digital Zoom	Up to 5x
Focal Length	f=5.7mm (W), 17.1mm (T) (f=32mm~96mm, 35mm equivalent)
Focus Mode	Normal: 0.1m~infinity (Wide), 0.35m~infinity (Tele) Marco: 10~70cm (Wide), 35~70cm (Tele)
Shutter Speed	2 ~ 1/2000 Sec.
Viewfinder	None

Camera Features

Auto Power Off / Time Out	Yes
ISO Equivalent	Auto, ISO80/100/200/400/800/1600/3200
Internal Memory	32MB internal memory Support SD/SDHC memory card up to 16GB
Flash Modes	Auto, Off, Fill, Red-eye
Shooting Mode	Auto, Auto Scene, P-Mode, Panorama, SCENE, Marco, Video, Playback
Tripod Mount	1/4" Standard
Preset Scene	Sport, Landscape, Night Landscape, Portrait, Self-Portrait, Night Portrait, Museum, Snow, Sunset, Fireworks, Beach, Party, Foliage, Aquarium, Kids&Pets, Copy, Backlight, Audio

Image Resolution	Image File Formats	Still Image: JPEG (Exif2.2)
	Image Quality Mode	Still Image: 4000 x 3000, 3664 x 2748, 3664 x 2442, 3264 x 2448, 2576 x 1932, 2048 x 1536, 1920 x 1080, 1600 x 1200, 640 x 480 Video Mode: 1280x720@15fps, 640x480@30fps, 320x240@30fps
	Quality Levels	Best, Better, Good
	DPOF	Version 1.1
Capture Features	Erase Protection	Yes
	Exposure Compensation	Selectable +/-2.0 EV with 0.3 EV steps
	Sharpness	High, Normal, Low
	Color	Vivid, Color, Black & White, Sepia
	Metering	Matrix, Center Weighted, Spot
	Focus	Multi-Zone, Center, Selected Area

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	Face / Smile Detection	Yes
	Flash Range	2.5m@wide
	Lens Thread	None
	Anti-Shake	Yes, High ISO
	Drive Mode	Single Mode, Burst Mode, M-Burst (VGA@16 shots), AEB Mode
	Quick Delete	Yes
	Quick View	Yes
	Quick Review	Yes
	Self Timer	2 or 10 seconds
	Playback Magnify	Up to 6X (0.5 steps)
Audio/Video	White Balance	Auto, Sunny, Tungsten, Fluorescent, Cloudy
	Audio / Video Out	PAL, NTSC
	Stream to SD/SDHC	Yes
	Speaker	Yes, Mono
	Movie File Format	AVI
	Movie Length	Maximum recording size: 4G
	Microphone	Yes, Mono
	Audio Recording	Yes, Wave format
Power	Battery	NP40
	Battery Life (Li-ion)	CIPA 200 images
Capability	Camera Interface	USB 2.0 full speed
	Host Platform	Windows 2000/XP/Vista
Standards	Operating Temperature	0°C ~ 40°C
	Language	English/ German/ French/ Italian/ Spanish/ Portuguese(Brazil)/Japanese/ Russian/ Traditional Chinese/ Simplified Chinese/Arabic/Turkish/ Dutch/ Swedish/ Danish/ Greek/ Polish/ Hungarian

Troubleshooting

Problem	Action
Camera does not turn on	• The battery may be exhausted. Charge or replace the battery. • The battery are installed incorrectly. Reinsert the battery observing the correct polarity.
Camera turns off automatically	Press the POWER button again to turn on the camera.
LCD turns dim automatically	Press any button to turn on the LCD when POWER SAVING setting (30 SEC or 1 MIN) is activated.
Empty battery icon is displayed on the LCD then camera turns off	Battery is exhausted. Charge or replace the battery.
LCD screen displays 'Card Requires Formatting'	Memory card format not recognized. Reformat the memory card.
LCD screen displays 'Card is Full'	Memory card is full. Replace the memory card with a new one or delete unnecessary images from the existing card.
LCD screen displays 'Card is Locked'	The card is protected by a protect switch mechanism. Move the switch to the unlock position.
Insufficient memory space to complete request	Insufficient space in memory to rotate an image or divide a video. Delete unnecessary images and videos.
No image displays on the TV screen	Incorrect TV-out type was selected. Set correct TV-out type to match your TV system.
Insufficient space on the card	Delete unnecessary images.

Information for Users on Collection and Disposal of Old Equipment and Used Batteries



1. In the European Union

These symbols on the products, packaging and/or accompanying documents mean that used electrical and electronic equipments and batteries should not be mixed with general household waste.

Used electrical/electronic equipments and batteries must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of these products. Following the implementation by member states, private households within the EU states may return their used electrical/electronic equipments and batteries to designated collection facilities free of charge*. In some countries your local retailer may also take back your old product free of charge if you purchase a similar new one. *Please contact your local authority for further details.



By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other countries outside the EU

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



For Switzerland: Used electrical/electronic equipment can be returned free of charge to the dealer, even when you don't purchase a new product. Further collection facilities are listed on the home page of www.swico.ch or www.sens.ch.

Note for the batteries symbol (bottom two symbol examples): This symbol might be used in combination with a designation for the chemical element or compound in use. In this case you have to comply with the requirement set by the Directive for the chemicals involved.